



AY010-3

NURSING HEALTH CARE

VOLUME 10, NUMBER 9

NOVEMBER 1989

Nursing
Education—
Wave of
the Future:

Critical Care
Nursing in
Baccalaureate
Programs

On the
Fast Track

Nonnurse
College
Graduates in
a Specialty
MA Program

TV vs. Lecture
Courses
for Nurses

Designing
Interactive
Video
Instruction

12/99 PMS 90-11063
EDWARD KIANKA EDITOR
ACQUISITIONS
STATISTICAL REFERENCE
CONGRESSIONAL INFO SERVICE
4520 EM HIGHWAY SUITE 800
WASHINGTON DC 20014
306

Official Publication of the National League for Nursing

NURSING & HEALTH CARE

VOLUME 10, NUMBER 9

NOVEMBER 1989



FEATURES

Critical Care Nursing in Baccalaureate Programs

By Christine A. Tanner, Jeanette Hartshorn, and Peri Rosenfeld 482

The authors take a look at nursing schools and come up with mixed answers about how the schools are responding to the fact that critical care is becoming the norm rather than the exception in hospitals.

On the Fast Track

By Harriet R. Feldman and Caroline Jordet .490

Feldman and Jordet describe an accelerated BSN track for nonnurse college graduates—they see it as a success, despite its short length, and they see the students as strong ones.

Nonnurse College Graduates in a Specialty Master's Program: A Success Story

By Patricia L. Smith 494

The author describes a 3-year program in which nonnurse baccalaureate graduates receive their first nursing degree at the MA level. The idea of "broadly educated nurses with specialty preparation" works, says Smith.

CHANGE OF ADDRESS: The National League for Nursing moved on October 2nd, 1989 to new quarters at 350 Hudson Street, New York, NY 10014. The toll-free number 1-800-NOW-1-NLN, will remain the same. The local number is 212-989-9393. The new FAX number is 212-989-3710.

NURSING & HEALTH CARE offers diverse views on subjects of interest to readers. Articles represent the opinions of individual contributing authors and are not necessarily those of the National League for Nursing.

A Comparative Study Between Interactive Television and Traditional Lecture Offerings for Nursing Students

By Clayton F. Parkinson and Sharon B. Parkinson 498

The authors report on the use of interactive TV as an education medium for nursing students who are studying pathophysiology, comparing it with the more traditional lecture method of teaching.

Designing Interactive Video Instruction: An Educator's Perspective

By Annette Battista-Calderone 504

The author suggests the implementation of a teaching strategy that incorporates interactivity of the computer with "auditory and visual capacity of video." The focus is on phases involved in the development of an IV therapy interactive program.

Departments

475 Editorial

477 Letters

479 Calendar

481 Washington Focus

511 NLN Perspective

514 Bookends

516 Announcements

517 News

519 Marketplace

520 Classifieds

473

NURSING & HEALTH CARE

Published by the
National League for Nursing
350 Hudson Street
New York, N.Y. 10014
Outside New York City: 800-NOW-1-NLN
In New York City: 212-989-9393

Chief Executive Officer

Pamela J. Maraldo, PhD, RN, FAAN
Vice President, Communications
Lisa Moss

Editor

Barbara J. Barnum, PhD, RN, FAAN

Managing Editor

Craig Little

Editorial Assistant

Michael Rivera

Art Director

Lillian Welsh

Artist

Lauren Stevens

Typesetting

Dan Diggies

Advertising Sales

Paul Piscator, deBeer Piscator Inc.
92 Lonely Cottage Drive
Upper Black Eddy, PA 18972—215-847-5396

National Sales Advertising Representative

Lynne Garon, *Nursing & Health Care*
Call 800-NOW-1-NLN (In NY City 212-582-1022)

Display and Classified Space Sales

Jill Rossinow, *Nursing & Health Care*
Call 800-NOW-1-NLN (In NY City 212-582-1022)

West Coast Advertising Representative

E.B. Moss, 213-669-1957
Call 800-NOW-1-NLN (In NY City 212-582-1022)

Advisory Board

Gloria Bruno, MA, RN

Vice president/director of nursing, Greenwich Hospital Association, Conn.

Sheila P. Burke, MPA, RN, FAAN

Chief of staff, Office of the Minority Leader, U.S. Senate, Washington, D.C.

Colleen Conway-Welch, PhD, RN, FAAN

Dean, School of Nursing, Vanderbilt University, Nashville, Tenn.

Kathleen M. Dirschel, PhD, RN

Vice chancellor/dean, Graduate School of Nursing, University of Massachusetts Medical Center, Worcester

Mary E. Duffy, PhD, RN

Associate professor, The University of Texas Health Care Center at Houston

Helen K. Grace, PhD, RN, FAAN

Coordinator of health programming and program director, W.K. Kellogg Foundation, Battle Creek, Mich.

Robert V. Piemonte, EdD, RN, FAAN, CAE

Executive director, National Student Nurses' Association, New York, N.Y.

Marianne Roncoli, PhD, RN

Clinical director, Obstetrics and Neonatal Nursing, Hospital of the University of Pennsylvania, Philadelphia

Christine Tanner, PhD, RN, FAAN

Professor, Office of Research, School of Nursing, The Oregon Health Sciences University, Portland

NATIONAL LEAGUE FOR NURSING, INC.

PRESIDENT AND DIRECTOR

Patty L. Hawken, PhD, RN,
Dean and Professor, School of Nursing,
University of Texas Health Science Center at
San Antonio

PRESIDENT-ELECT AND DIRECTOR

Claire M. Fagin, PhD, RN, FAAN
Margaret Bond Simon Dean, University of
Pennsylvania School of Nursing,
Philadelphia

TREASURER AND DIRECTOR

Joseph Duffy
Vice President and Manager Director, Chase
Capital Management Company, Los Angeles,
Cal.

SECRETARY

Pamela J. Maraldo, PhD, RN, FAAN
Chief Executive Officer, National League for
Nursing, New York, N.Y.

GOVERNORS AT LARGE

Lenore Appenzeller, MPS, RN
Vice President, Nursing and Patient Services,
St. Luke's-Roosevelt Hospital Center, New
York, N.Y.

Sara E. Barger, DPA, RN

Head, Department of Professional Development Services, Director, College of Nursing,
Clemson University, S.C.

Betty Battenfield, EdD, RN

Chair, Department of Nursing, University of
Arkansas-Fayetteville

Beverly H. Bonaparte, PhD, RN, FAAN

Assistant Vice President, Medical Operations,
New York City Health and Hospitals Corp.,
N.Y.

Donald W. Cordes

President, Cordes & Associates, Inc., Des
Moines, Iowa

Lucille H. Davis, PhD, RN, FAAN

Director, Center for Nursing, Northwestern
University, Chicago, Ill.

Ellen T. Fahy, EdD, RN

Dean, School of Nursing, University of Minnesota,
Minneapolis

M. Louise Fitzpatrick, EdD, RN, FAAN

Dean and Professor, College of Nursing,
Villanova University, Pa.

Sylvia E. Hart, PhD, RN

Dean and Professor, The University of Tennessee,
College of Nursing, Knoxville

Nan B. Hechenberger, PhD, RN

Dean, University of Maryland, School of
Nursing, Baltimore

Carole Hudgings, PhD, RN

Director International Nursing Library, Sigma
Theta Tau International, Indianapolis, Ind.

Jeanette Lancaster, PhD, RN, FAAN

Dean and Professor, Wright State University-
Miami Valley School of Nursing, Dayton,
Ohio

Lillian M. McCreight, MPH, RN

Director of Assessment and Quality
Assurance, South Carolina Department of
Health and Environmental Control, Columbia

Linda Moody, PhD, RN, FAAN

Professor, College of Nursing, University of
Florida, Gainesville

Sr. Mary Robert Nagle, MEd, RN

Director, St. Vincent's Hospital School of
Nursing, New York, N.Y.

Joan O'Leary, EdD, RN

Associate Professor, College of Nursing,
Villanova University, Pa.

Mariene Rosenkoetter, PhD, RN

Dean, University of North Carolina-
Wilmington, School of Nursing

Florence Tankovich, MS, RN

Executive Director, VNA of Newport County,
R. Is.

Alan Trench

Vice President, Marine Midland Bank, New
York, N.Y.

Joan Trofino, EdD, RN, CNAA

Vice President, Patient Care Services, River-
view Medical Center, Red Bank, N.J.

Dani Wecht, MSN, RN

Vice President, The Union Memorial
Hospital, Baltimore, Md.

Nursing & Health Care (ISSN 0276-5284) is published monthly (except July and August) by the National League for Nursing, Inc., 350 Hudson Street, New York, N.Y. 10014. Members of the National League for Nursing receive *Nursing & Health Care* as a membership benefit. Subscription rates for nonmember individuals: \$20 one year, \$35 two years; libraries and institutions: \$35 one year, \$60 two years; Outside U.S. add \$10 per year for postage. Second-class postage paid at New York, N.Y., and additional mailing offices. POSTMASTER: Send address changes to *Nursing & Health Care*, National League for Nursing, 350 Hudson Street, New York NY 10014. Copyright 1989 by National League for Nursing, Inc. except where otherwise noted. Printed in U.S.A. All rights reserved. Reproduction in whole or in part without written permission is prohibited.

Critical Care Nursing in Baccalaureate Programs

Critical care nursing began to emerge as a specialty in the 1970s. At that time, coronary care units and intensive care units were few in number. Today, nearly all hospitals have critical care units. The education of the nurses who work in these units was, at first, "on the job" or provided through continuing education courses. Since those early days, the body of knowledge and research base in CCN has grown. Despite this growth, there is limited evidence of the inclusion of content specific to critical care in baccalaureate programs. Most of the data available are anecdotal and provide only examples of how this content is included in the curricula of some undergraduate programs. Experiences in offering elective or required courses in critical care have been reported by several authors (Clochesy, 1983; Geels, 1974; Mathew & Goodwin, 1983; Millen & Hufschmidt, 1984).

In 1984, the AACN identified inclusion of critical care content in undergraduate programs as a major area of focus. A position statement released that year entitled "Integration of Critical Care Nursing Concepts and Clinical Experiences Into Professional Nursing Programs" outlined a number of steps that should be used to accomplish the integration of concepts. Specifically, the statement documents the need for students in consultation with faculty and critical care practitioners, to utilize the nursing process in caring for the critically ill and their families. The statement confirms the need for

**Christine A. Tanner,
Jeanette Hartshorn,
and Peri Rosenfeld**

appropriately prepared faculty (in both education and experience) to work with students. All of these changes should also be supported by a closer working relationship between faculty and staff.

Three years later, a position statement specifically outlined a mandate for inclusion of critical care content in baccalaureate programs. "Integration of Critical Care Nursing Concepts and Clinical Experiences Into Professional Nursing Programs" specifically notes the importance of including direct clinical experience in

Christine A. Tanner, PhD, RN, FAAN, is professor of Adult Health and Illness Nursing, Oregon Health Sciences University School of Nursing, Portland, Oregon. She was chair of the AACN Invitational Conference Task Force on Critical Care Nursing Curriculum at the time this survey was conducted. Jeanette Hartshorn, PhD, RN, FAAN, is Associate Professor, College of Nursing, Medical University of South Carolina, Charleston South Carolina. She was immediate past president of AACN at the time this survey was conducted. Peri Rosenfeld, PhD is director, Research Division, National League for Nursing, New York, New York. The assistance of members of the Invitational Conference Task Force and the Education Special Interest Group in the design of the survey instrument is acknowledged. They are Kathleen Andreoli, Jan Boller, Barbara Daly, Sandra Goodnough, Marguerite Kinney, Mairead Hickey, and Chris Winkelman. Special acknowledgement to Jan Boller, Sandra Goodnough, and Linda Searle for their thoughtful comments on earlier versions of this article.

In today's hospital, critical care is fast becoming the norm rather than the exception. How well have our schools of nursing responded to this fact? Tanner, Hartshorn, and Rosenfeld survey schools and find mixed answers in spite of the AACN's directive favoring critical care nursing as an essential component in the baccalaureate program. As care needs change, will our schools plan for the future?

Key Words: critical care, curriculum, specialty education, generalist education, curriculum content, certification

the care of the critically ill. The statement further recommends that the AACN "...in conjunction with bac-

calaureate schools of nursing and appropriate accrediting bodies" progress toward "...the development, implementation and evaluation of strategies to incorporate critical care content and direct clinical experiences in baccalaureate nursing curricula" (AACN, 1987).

"...faculty beliefs were the most important set of factors that create barriers to CCN in the baccalaureate curriculum. Of these, the belief that CCN is a specialty seems to figure most prominently."

The need for action directed toward CCN baccalaureate education was highlighted further by a study of critical care nurse supply and requirements, conducted by Levine and Associates for AACN in 1988. The study indicated a current "severe" shortage of critical care nurses, citing a 13.8% vacancy rate nationwide. The study further indicated that the current supply would have to be increased by 42% to 90% to meet the demand for critical care nurses in 1990; the shortage of baccalaureate and master's prepared nurses is even more acute, particularly in light of the need for "specialized experience and knowledge" and the ever increasing acuity of critically ill patients. Among the conclusions drawn from the study was the following:

Although critical care requires considerable knowledge beyond basic nursing education, knowledge that according to survey respondents was not imparted in the basic programs, there appears to be little educational involvement beyond brief episodic continuing education programs. Higher education in critical care nursing is a relatively untapped area that promises great potential for improving the quality of care received by critical care patients. (AACN, 1988, p. 11)

Although education in critical care nursing is only one of many avenues to resolution of the nursing shortage in critical care areas, it is nevertheless an important one. There are currently no data on the extent to which critical care nursing is already included in the baccalaureate curricula, and little

data on factors that facilitate or discourage its inclusion (Dunbar, 1986). The current study is designed to describe the current status of CCN education in baccalaureate nursing programs.

The following questions guided this study:

1. To what extent are CCN content and experiences included in baccalaureate nursing programs?
2. What are the characteristics of CCN curricula at the baccalaureate level, in terms of the nature of the courses, and the amount of clinical experience?
3. What are the characteristics (educational preparation, CCN experience, and CCN certification) of faculty responsible for teaching CCN?
4. What is the quality of the critical care curriculum and the level of preparation of the graduates as perceived by faculty involved in critical care instruction?
5. What are the perceived barriers to incorporation of critical care content in the baccalaureate curriculum?
6. What are the relationships among the faculty characteristics, perceived barriers, nature and quantity of CCN course offerings, and perceived quality of the critical care curriculum?

Methods

Data on critical care nursing education were collected in the summer and fall of 1988 through a survey questionnaire sent to all 455 basic baccalaureate programs in the United States. Survey methodology was the most appropriate because it served two important functions. First, it was necessary to collect data from basic baccalaureate nursing programs (e.g., number of faculty, number of clinical hours) to understand the current status of CCN in the nation's undergraduate programs. In addition, in order to identify need for change, some initial measures were needed to evaluate the perceived quality of the current CCN curricula and to assess obstacles in developing and implementing such curricula.

Questionnaire

The questionnaire was developed by the investigators for this study. One investigator and members of the AACN Task Force prepared an initial draft; it was reviewed by six individuals knowledgeable about CCN education and practice. The final instrument consisted of five sections: (1) respondent information; (2) information about faculty responsible for clinical teaching in CCN; (3) critical care preparation at the baccalaureate level, including (a) the form in which CCN content and experiences were offered (separate course, or included in other courses); (b) the credit hours and contact hours in clinical practice; (c) the nature of clinical experiences (observation or provision of care); and (d) student-faculty ratio; (4) evaluation of the CCN curriculum, including the faculty's perception of new graduates' ability to practice CCN; and (5) perceived barriers to the inclusion of CCN in the baccalaureate program.

Scale scores were derived for two variables: evaluation of the CCN curriculum and perceived barriers to inclusion of CCN content. Evaluation of the CCN curriculum was comprised of two subscales: (1) the faculty perception of the new graduates' ability to practice CCN was a single item, rated on 4 points from "not at all prepared to begin practice in the care of the critically ill" to "can care for critically ill patients independently;" and (2) evaluation of theory and clinical experiences was comprised of the total score on four items, each rated on a 5-point scale from adequate to inadequate. Internal consistency reliability for this 4-item scale was .89.

The perceived barriers scale was comprised of three subscales: (1) barriers caused by faculty beliefs was comprised of four items representing views of the total faculty that might prevent or discourage the inclusion of CCN in the curriculum; (2) barriers related to clinical agency policy contained four items representing the adequacy and availability of clinical facilities for CCN experiences; and (3) barriers related to faculty preparation was comprised of three items related to the clinical expertise of the faculty in CCN. Each of these 11 items on the barrier scale was rated on a 4-point scale of importance in

influencing curriculum decisions, from "not a factor at our school" to "very important." Coefficient alphas for the three subscale scores were, respectively, .68, .74, and .65; for the total scale, the coefficient alpha was satisfactory at .75.

Sample

In order to reflect the most comprehensive portrayal of baccalaureate nursing education, the survey was sent to the entire universe of basic baccalaureate programs in the United States. The data base at the National League for Nursing (NLN) was used to identify the 455 state-approved baccalaureate nursing programs. The survey was addressed to the director/dean of the program, with the request that the survey be sent to the faculty member most familiar with critical care nursing. Two mailings yielded a response rate of 85%. Responses were coded and entered by a critical care nurse who was interning at NLN's Division of Research. Open-ended questions were evaluated through content analysis.

Of the 385 respondents, 167 (43.5%) were directly involved in the CCN curriculum, either as a faculty member or as coordinator of the course that includes critical care nursing content. Of these, 29 (17.4%) held a doctorate as their highest degree, 142 (85%) declared medical-surgical nursing as their specialty, and 34 (20.4%) were currently certified in critical care nursing (CCRN), and an additional 12 (7.2%) had been certified at one time. This group of respondents was quite experienced in the care of the critically ill; 101 (60.5%) had more than 5 years of experience and 41 (24.6%) had 3-5 years of experience. Fifty-nine (36.4%) are currently practicing, while an additional 30 (18.5%) have had experience within the last 1-2 years.

Results and discussion

Inclusion of CCN in the baccalaureate curriculum: Of the 385 returned questionnaires, 371 contained usable responses to questions about the critical care curriculum. A surprisingly large percentage of programs offered some content on critical care nursing: 353 (95.2%). Ninety-three (25%) offered it as a separate course, 192 (51.5%) included it in

other courses, and 69 (17.9%) included it in both a separate course and in other courses.

Nature of the CCN curriculum

Separate CCN courses: Of those 93 programs offering a separate course, in 74 programs (80.4%) the course was required. For programs on a semester system (78), the range of

clinical component). The total number of clinical hours ranged from 6 hours to 272 hours. The average number of clinical hours was 103, with a standard deviation of 52.

The faculty student ratio for these separate courses with a clinical component ranged from one to one to one to 12. The mean was one faculty to 7.5 students, with a standard deviation of 2.3 students.

Table 1: Mean, Standard Deviation and Proportion of Respondents Identifying Barriers to CCN in the Baccalaureate Curriculum

FACTOR	Mean	SD	Percentage
Faculty beliefs that:			
CCN is a specialty and the goal of BSN curriculum is to prepare specialists	2.06	1.08	69.3*
Critically ill patients are too sick to be cared for by undergraduate students	1.09	0.97	32.8
CCN is too technological	0.98	0.98	27.0
Curriculum design does not allow inclusion of another course	1.63	1.31	53.6
Experiences limited because:			
Agency policy does not allow students to provide care in the critical care units	0.54	0.93	15.5
Agency requires a student-to-faculty ratio that cannot be achieved in our program	0.75	1.10	21.8
Nursing staff cannot serve as preceptors for our undergraduate students	0.72	1.02	21.0
There are not enough critical care units in which our students can obtain experience	0.66	1.05	18.6
Faculty preparation is limited because:			
There is limited opportunity for practice	0.92	1.07	29.1
Clinical expertise is not as valued as other aspects of the faculty role	1.10	1.22	34.4
We have difficulty recruiting critical care experts into faculty roles	1.16	1.14	35.7

*Percentage of respondents who identified these factors as important or very important as barriers to CCN in the baccalaureate curriculum.

credit hours was from 2 to 12, with a mean of 5.5. For programs on a quarter system (9), the range of credit hours was from 2 to 9, with a mean of 4.67. In most instances, the course was offered in the senior year (87%) or in both the junior and senior years (7%). It includes a clinical component (95%) with opportunities for providing care (95% of those with a

Both separate and integrated CCN courses

Two-hundred and sixty-one (261) programs either included CCN in other courses or offered a separate course and included CCN in other courses. Respondents from 244 of these programs provided additional information. In 106 (43%), CCN content was

included in only one course. In 98 (40%), it was included in two courses, while in 40 (16%) it was included in three or more courses.

Similar to programs with separate courses, programs offered integrated courses most frequently in the senior year (50%) or in both the junior and senior years (35%). Most (82%) included a clinical component with opportunities for providing care (90% of those that had a clinical component). The number of total clinical hours ranged from 2 to 270, with a mean of 66 hours and a standard deviation of 56. Clinical instruction was provided in one of two models: (1) the faculty member's only responsibility for supervision was for students in the critical care units (46%) or (2) faculty supervised students both in the critical care unit and on other units (54%). The average faculty-student ratio was about the same in both situations: one faculty member to every 7.6-7.8 students.

Characteristics of CCN faculty

An average of nearly three faculty in each school were involved in CCN instruction. The reported range for the number of faculty was from one to 18. Approximately 25% of all faculty teaching CCN held doctoral degrees (13% in nursing, 12% in other fields). Approximately 25% of all faculty are reported by the respondents to be cer-

tified by the AACN (CCRN). The faculty were also reported to have extensive experience: 65% had more than 5 years of experience in critical care nursing practice.

Quality of CCN curriculum

Respondents were asked to evaluate the adequacy of four areas of the CCN curriculum: (1) time allotted to CCN theory, (2) the depth of CCN theory, (3) time allotted to gain experience in CCN practice, and (4) availability of clinical learning experiences. A majority rated all of these aspects as "somewhat adequate" to "adequate." Time allotted to theory seemed to be a problem in 19.1% of the programs; depth of theory was judged to be less than adequate in 18.9% of the programs. Availability of clinical learning experiences is a problem in 17.3% of the programs. However, the time allotted for clinical experience is judged to be less than adequate by 31% of the respondents.

Nearly 1 in 10 (9.4%) of the respondents indicated that graduates of the BSN program were not at all prepared to begin practice in the care of the critically ill. A majority (232, or 60.9%) felt that graduates would need substantial additional orientation to care for the critically ill. One hundred and two (26.8%) of the respondents indicated that graduates would need minimal additional orien-

tation to care of the critically ill, while only one respondent felt that new graduates could care for critically ill patients independently.

Barriers to incorporation of CCN in the baccalaureate curriculum

Respondents were asked to identify which factors adversely affected decisions about inclusion of CCN in the curriculum. The responses are summarized by item in Table 1. The items are rated on a 3-point scale, with zero not being a factor and 3 being a very important factor. The means indicate to some extent which factors stand out as the more important barriers, e.g., a mean of 2 would suggest that a factor is somewhat important in decisions about inclusion of CCN in the curriculum. In addition, Table 1 indicates the proportion of respondents who reported each factor as being either important or very important. Both analyses clearly show that faculty beliefs were the most important set of factors that create barriers to CCN in the baccalaureate curriculum. Of these, the belief that CCN is a specialty seems to figure most prominently.

The questionnaire also included two open-ended questions, asking respondents to identify additional barriers and facilitators to the inclusion of CCN in the baccalaureate curriculum. The responses related to barriers fell into eight categories: (1) not enough faculty with critical care expertise, (2) generalist orientation of undergraduate curricula, (3) student faculty ratio, (4) time limitations in the curriculum, (5) limitations in clinical agencies, (6) lack of texts written for beginning critical care practice, (7) lack of defined curricular content by NLN/ANA, and (8) lack of bachelor's prepared preceptors. Facilitators included the following: (1) faculty commitment, (2) acknowledgment of increased need for this area of practice, (3) students' interest and demand for ICU experiences, (4) good marketing for school, (5) demand for graduates to be prepared in ICU practice, (6) availability of clinical settings, (7) questions on state board exams, (8) use of certain models or theories, and (9) graduate programs in the school specific to critical care.

Table 2. Correlations Among Characteristics of CCN Courses, Barriers, and Quality of CCN Curriculum and New Graduate Preparation

Quality	Barriers to Inclusion				Perceived	
	Total	FB	AP	FE	CCN Curr	Grad
Characteristics						
Nature of CCN	.15	-.18	-.04	-.07	-.15*	.08
Number of Hours	-.25*	-.25*	-.15	-.11	.40*	.24*
SF Ratio	-.10	-.04	-.06	-.11	.05	.08
N of Faculty	-.01	.12	-.12	.00	-.11	.10
Barriers						
Total	1.00	.8*	.61*	.68*	-.54*	-.15*
FB		1.00	.27*	.29*	-.32*	-.18*
AP			1.00	.14	-.43*	-.15*
FE				1.00	-.39*	-.05

* $p < .05$.

Relationships among the characteristics of CCN courses, barriers and perceived quality of the critical care curriculum

To determine the extent to which relationships exist among selected characteristics of the CCN courses, the perceived degree of barriers, and the perceived quality of the CCN curriculum, Pearson's Product-Moment Correlation Coefficients were computed (see Table 2).

Characteristics of CCN courses and faculty that were considered include: (1) nature of the curriculum measured on an ordinal scale (0 = not included, 1 = separate course, 2 = integrated in one or more additional courses, 3 = both integrated and separate courses); (2) total number of clinical hours; (3) the student-faculty ratio; and (4) the total number of faculty involved in teaching CCN. The barriers variables were the total barriers score, and the subscale scores on faculty beliefs (FB), agency policy (AP), and faculty experience (FE). The perceived quality was the overall evaluation of the CCN curriculum (CCN CURR) and the preparation of the graduate for practice in CCN (Grad). The only program characteristic that was related to perceived quality was the number of clinical hours. Whether CCN was included in a separate course, integrated, or in more than one course apparently had no relationship to the perceived quality. Also of interest is that the student-faculty ratio was unrelated to both perceived quality and barriers to inclusion.

Barriers to inclusion of CCN content are negatively related to the number of clinical hours. All other subscale scores on barriers were negatively related to the perceived quality of the program. In other words, the fewer the perceived barriers to inclusion of CCN, the higher the quality. These findings are not surprising.

Discussion

According to these survey results, a surprisingly large proportion of U.S. baccalaureate nursing programs include some critical care nursing content in their curricula. The faculty-student ratios tend to be low. The faculty involved in CCN education are well educated and quite ex-

perienced; nearly a quarter hold the doctoral degree and/or are certified in critical care nursing practice. Nearly two-thirds have more than 5 years of experience in CCN.

Yet despite these results, there are several indications of the dilemmas that nurse educators face regarding inclusion of CCN content. These dilemmas are not unlike those related to inclusion of content in any other particular area of nursing practice. First, there apparently is little agreement in the profession about what

"According to these survey results, a surprisingly large proportion of U.S. baccalaureate nursing programs include some critical care nursing content in their curricula."

constitutes generalist practice and, therefore, what would constitute educational preparation for such a practice. Nearly 70% of the respondents in this survey indicated that faculty in their school believed that CCN is a specialty, and this belief inhibited inclusion of CCN content. Faculty also believe that the curricula are already packed with content, and inclusion of additional specialized areas of practice is neither possible nor desirable.

Whether or not CCN is considered a specialty, its inclusion in the basic undergraduate curriculum may be directed toward several goals: (1) preparing for beginning level practice in a critical care setting; (2) acquiring greater confidence and skill in nursing practice that would be applicable in many settings, including technical skills (Mathew & Goodwin, 1983; Millen & Hufschmidt, 1984), use of nursing process and conceptual frameworks (Dunbar, 1986; Millen & Hufschmidt, 1984), increased organizational skills, communication skills with physicians, abilities in decision making (Mathew & Goodwin, 1983), and improved coping ability in stressful situations (Clochesy, 1983); and (3) pursuing postgraduate education in critical care by having early positive exposure to critical care settings. Respondents were not asked to identify which, if any, of these goals were the basis for the CCN education in their respective programs. However,

the tremendous variability in the nature and amount of CCN in the undergraduate curriculum suggests that different goals may be operating.

If the goal is to prepare graduates for beginning level practice in CCN, these data suggest that the goal is not being realized. Sixty-one percent of the respondents felt that graduates of their programs would need substantial additional orientation to care for the critically ill. There is no agreement within the profession about which of these goals are desirable for "general-

ist" preparation, nor which are achievable within the context of baccalaureate education. The

AACN 1987 position statement suggests that baccalaureate graduates need to have the "knowledge and skills to practice at an entry level in the care of patients with complex problems and needs," but it stops short of explicitly recommending that they be prepared for entry level positions in critical care units.

Another dilemma implied by these survey results is the relationship between education and practice, specifically, faculty involvement in clinical practice to maintain their own competency and practicing nurses' participation in undergraduate education. Nearly one-third of the respondents indicated that there is limited opportunity for their own practice; nearly one-fifth of the respondents indicated that nursing staff cannot serve as preceptors for undergraduate students. These figures, when taken together, raise serious issues about the possibilities for quality clinical education in CCN as part of the baccalaureate program.

The issues raised by prior research and by this survey were discussed at an invitational conference hosted by the AACN in March 1989. The goals of this conference were: (1) to examine issues surrounding the inclusion of CCN content into the baccalaureate curriculum, (2) to achieve consensus on the need to integrate critical care nursing content into the baccalaureate curriculum, (3) to achieve consensus on the preparation of

nurses to care for critically ill patients, and (4) to develop recommendations and strategies regarding the educational preparation of nurses in CCN (proceedings from this conference are available from AACN, One Civic Plaza, Newport Beach, CA 92660). Participants in this conference included 120 nurses and nurse educators from 40 schools of nursing and associated clinical practice agency. Recommendations from the conference had been forwarded to the AACN Board of Directors for their action before this article went to press.

Conclusions

1. There is tremendous variability in the nature and amount of CCN in the undergraduate curriculum. The amount of critical care content, the way in which it is offered, and the required amount of clinical time varies tremendously from program to program.
2. Faculty generally rate the quality of the CCN offerings as being adequate, although the majority indicate that clinical time is somewhat less than adequate.
3. The faculty indicate that graduates from most of these baccalaureate programs would need substantial additional orientation before beginning to practice in CCN.
4. Nearly a quarter of the faculty involved in CCN instruction hold the doctoral degree and/or are certified. Nearly two-thirds have more than 5 years of experience in CCN.
5. Faculty report a wide variety of barriers to the inclusion of CCN in baccalaureate curricula. Both faculty beliefs about the place of CCN as a specialty and the role of baccalaureate education in the preparation of generalists, and requirements for low faculty-to-student ratios, present barriers to nearly half the respondents.

In summary, there is a need to resolve several issues related to inclusion of CCN in the baccalaureate curriculum. These include: (1) the nature of specialist versus generalist preparation; (2) the goals for inclusion of CCN, (as well as content related to any other area of practice which may be considered specialized); (3) the relationship between education and practice, and the responsibilities of each in educating competent practitioners to provide safe care to critically ill patients.

AACN recommendations

The AACN hosted an Invitational Conference on Critical Care Nursing in the Baccalaureate Curriculum in March 1989. Recommendations based on deliberations of the participants of that conference were forwarded to the AACN Board of Directors for their action. The following were recommendations approved by the AACN Board at their August 1989 meeting.

Actions of the American Association of Critical-Care Nurses Board of Directors Related to Critical Care Nursing in Undergraduate Education

In August 1989, the AACN Board of Directors approved the following actions:

1. To develop an essentials document that defines the essential competencies and content for differentiated levels of critical care nursing practice (associate, baccalaureate and graduate).
2. To develop and disseminate guidelines for roles of academic and service educators in the preparation of critical care practitioners.
3. To continue efforts to develop and disseminate educational resources to support the implementation of critical care content and experience in undergraduate and graduate programs.

References

- AACN. (1984). Position paper: Integration of critical nursing concepts and clinical experiences into professional nursing programs. Newport Beach, CA: AACN.
- AACN. (1987). Position paper: Need for critical care content and clinical experiences in baccalaureate nursing curricula. Newport Beach, CA: AACN.
- AACN. (1988). *Summary analysis of critical care nurse supply & demand*. Newport Beach, CA: AACN.
- Clochesy, J. M. (1983). Preparing senior nursing students through optional clinical experiences. *Dimensions of Critical Care Nursing*, 2(6), 366-370.
- Dunbar, S. (1986). Imperatives for nursing education. *Heart and Lung*, 15(6), 18A-22A.
- Geels, W. J., Brand, L. M., & Passos, J. Y. (1974). The ICU and collegiate nursing education. *Journal of Nursing Education*, 13(1), 15-20.
- Mathew, D. M., & Goodwin, M. H. (1983). Critical care practicum. *Focus on Critical Care*, 10(1), 38-42.
- Millen, D. L., & Hufschmidt, A. P. (1984). Preparing the undergraduate for critical care. *Dimensions of Critical Care Nursing*, 3(5), 307-312.

Notice to Subscribers

Please note the following increase for subscription rates for *Nursing & Health Care*, to take effect January 1, 1990:

Individuals:

One-year rate—\$30.00
Two-year rate—\$50.00

Institutions:

One-year rate—\$50.00
Two-year rate—\$85.00

Individual subscribers can take advantage of the special offer to renew at the old rates by December 15. See coupon elsewhere in this issue.

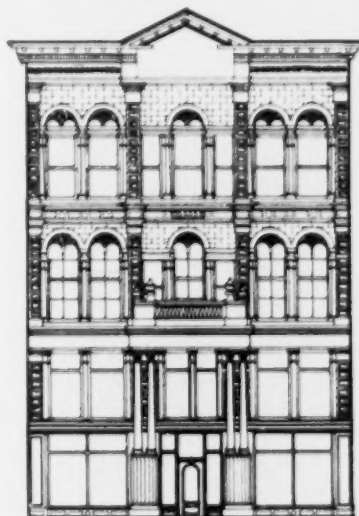
PRESERVATION PLAN ON IT

Planning on restoring a house, saving a landmark, reviving your neighborhood?

Gain a wealth of experience and help preserve our historic and architectural heritage. Join the National Trust for Historic Preservation and support preservation efforts in your community.

Write:

National Trust
for Historic Preservation
Department PA
1785 Massachusetts Ave., N.W.
Washington, D.C. 20036



NURSING HEALTH CARE

VOLUME 11, NUMBER 4

APRIL 1990

Developing
Management
for Nursing
Administration

Technology
and Structure
of Nursing
Organizations

Knowledge
and Skills
for Nurse
Administrators

Nightingale's
Perspective
of Nursing
Administration

Nursing
Administration
as Paradigm
Reflection

A Nursing
Department
Can and
Should Plan
for the Future

12/99 PMS 90-11063
EDWARD KIANKA EDITOR
ACQUISITIONS REFERENCE INDEX
STATISTICAL INFO SERVICE
CONGRESSIONAL SUITE 800
4520 EM HIGHWAY
WASHINGTON DC 20014
3DG

Official Publication of the National League for Nursing

NURSING HEALTH CARE

VOLUME 11, NUMBER 4

APRIL 1990



FEATURES

Development Management for Nursing Administration

By Richard Heyden, Gloria Lucas,
and Beverly Henry 178

The authors examine what is needed to set up and maintain effective nursing administration in both developing nations and here in U.S. underdeveloped areas—it's time, in their words, for "nursing Administration to look 'outward'—to place the management of health services in a world context."

Knowledge and Skills for Nurse Administrators

By Barbara A. Mark, Jean T. Turner,
and Sheila Englehardt 184

What education and skills does a nurse administrator need to function at top level today? The authors look at education needs of both nurse executives and nurse managers, with a comparison to the more typical education provided in nursing administration programs.

Nursing Administration Research as a Paradigm Reflection

By Charlotte McDaniel 190

McDaniel scrutinizes recent research in nursing administration. She indicates that current research is atomistic—focused on the nurse provider—and not on organization, patient, or administration, and offers suggestions on where research should turn.

Technology and Structure of Nursing Organizations

By Judith W. Alexander and Barbara Mark 194

The two authors use a "technostructural contingency model" that allows them to compare and contrast nursing units. They assess technology in three ways—instability, variability, and uncertainty—while they assess structure in terms of vertical and horizontal participation, as well as formalization. They offer case studies as examples.

Nightingale's Perspective of Nursing Administration

By Beverly Henry, Stephanie Woods,
and Jean Nagelkerk 200

This article combines elements of the March issue's "History" theme with this month's "Nursing Administration" theme. Nightingale, while best remembered for her battlefield nursing, was also an accomplished nursing administrator whose ideas might well be applicable today.

A Nursing Department Can and Should Plan for the Future

By Patricia Anvaripour, Clement Bezold,
and Gail Weissman 207

This month's "In My Opinion" describes how and why nursing departments ought to take the future into account. The authors use as their model the Futures of Nursing project at The Mount Sinai Center in New York City.

Departments

- | | |
|----------------------|---------------------|
| 171 Editorial | 211 NLN Perspective |
| 173 Letters | 215 News |
| 175 Calendar | 216 Bookends |
| 176 Washington Focus | 218 Classifieds |

The articles in this issue come courtesy of the Council on Graduate Education for Administration in Nursing (CGEAN). Chairperson is Dr. Beverly Henry.

NURSING & HEALTH CARE offers diverse views on subjects of interest to readers. Articles represent the opinions of individual contributing authors and are not necessarily those of the National League for Nursing.

NURSING & HEALTH CARE

Published by the
National League for Nursing
350 Hudson Street
New York, N.Y. 10014
Outside New York City: 800-669-1656
In New York City: 212-989-9393

Chief Executive Officer
Pamela J. Maraldo, PhD, RN, FAAN
Vice President, Communications
Lisa Moss

Editor
Barbara J. Barnum, PhD, RN, FAAN

Managing Editor
Craig Little

Art Director
Lillian Welsh

Artist
Lauren Stevens

Typesetting
Dan Diggles

Advertising Sales
Paul Piscator, deBeer Piscator Inc.
92 Lonely Cottage Drive
Upper Black Eddy, PA 18972—215-847-5396

Advertising Sales Information
Division of Communications, *Nursing & Health Care*
Call 800/669-1656 (In NY City 212-989-9393)

Advisory Board

Gloria Bruno, MA, RN
Vice president/director of nursing, Greenwich Hospital Association, Conn.

Sheila P. Burke, MPA, RN, FAAN
Chief of staff, Office of the Minority Leader, U.S. Senate, Washington, D.C.

Colleen Conway-Welch, PhD, RN, FAAN
Dean, School of Nursing, Vanderbilt University, Nashville, Tenn.

Kathleen M. Dirschel, PhD, RN
Vice chancellor/dean, Graduate School of Nursing, University of Massachusetts Medical Center, Worcester

Mary E. Duffy, PhD, RN
Associate professor, The University of Texas Health Care Center at Houston

Helen K. Grace, PhD, RN, FAAN
Coordinator of health programming and program director, W.K. Kellogg Foundation, Battle Creek, Mich.

Robert V. Piemonte, EdD, RN, FAAN, CAE
Executive director, National Student Nurses' Association, New York, N.Y.

Marianne Roncoli, PhD, RN
Clinical director, Obstetrics and Neonatal Nursing, Hospital of the University of Pennsylvania, Philadelphia

Christine Tanner, PhD, RN, FAAN
Professor, Office of Research, School of Nursing, The Oregon Health Sciences University, Portland

NATIONAL LEAGUE FOR NURSING, BOARD OF GOVERNORS

PRESIDENT

Patty L. Hawken, PhD, RN,
Dean and Professor, School of Nursing,
University of Texas Health Science
Center at San Antonio

PRESIDENT-ELECT

Claire M. Fagin, PhD, RN, FAAN
Margaret Bond Simon Dean, University
of Pennsylvania School of Nursing,
Philadelphia

TREASURER

Joseph Duffy
Vice President and Manager Director,
Chase Capital Management Company,
Los Angeles, Calif.

SECRETARY

Pamela J. Maraldo, PhD, RN, FAAN
Chief Executive Officer, National
League for Nursing, New York, N.Y.

GOVERNORS AT LARGE

Lenore Appenzeller, MPS, RN
Vice President, Nursing and Patient Services,
St. Luke's-Roosevelt Hospital
Center, New York, N.Y.

Sara E. Barger, DPA, RN, FAAN
Head, Department of Professional Services,
College of Nursing, Clemson
University, S.C.

Betty Battenfield, EdD, RN
Chair, Department of Nursing, University
of Arkansas-Fayetteville

Beverly H. Bonaparte, PhD, RN, FAAN
President, The Gladstone Group, Inc.

Donald W. Cordes
President, Cordes & Associates, Inc.,
Des Moines, Iowa

Ellen T. Fahy, EdD, RN
Dean, School of Nursing, University of
Minnesota, Minneapolis

M. Louise Fitzpatrick, EdD, RN, FAAN
Dean and Professor, College of Nursing,
Villanova University, Pa.

Sylvia E. Hart, PhD, RN
Dean and Professor, The University of
Tennessee, College of Nursing,
Knoxville

Nan B. Hechenberger, PhD, RN
President, Newmann College, Aston, Pa.

Carole Hudgings, PhD, RN
Director International Nursing Library,
Sigma Theta Tau International, Indianapolis, Ind.

Jeanette Lancaster, PhD, RN, FAAN
Dean and Professor, University of
Virginia, School of Nursing

Lillian M. McCreight, MPH, RN
Director of Assessment and Quality
Assurance, South Carolina Department
of Health and Environmental Control,
Columbia

Linda Moody, PhD, RN, FAAN
Professor, College of Nursing, University
of Florida, Gainesville

Sr. Mary Robert Nagle, MEd, RN
Director, St. Vincent's Hospital School
of Nursing, New York, N.Y.

Joan O'Leary, EdD, RN
Associate Professor, College of Nursing,
Villanova University, Pa.

Marlene Rosenkoetter, PhD, RN
Dean, University of North Carolina-
Wilmington, School of Nursing

Florence Tankevich, MS, RN
Executive Director, VNA of Newport
County, R.I.

Alan Trench
Vice President, Marine Midland Bank,
New York, N.Y.

Joan Trofino, EdD, RN, CNAA
Vice President, Patient Care Services,
Riverview Medical Center, Red Bank,
N.J.

Verle Waters, MA, RN
Assistant Dean, Ohlone College, Fremont,
Calif.

Dani Wecht, MSN, RN
Vice President, The Union Memorial
Hospital, Baltimore, Md.

Nursing & Health Care (ISSN 0276-5284) is published monthly (except July and August) by the National League for Nursing, Inc., 350 Hudson Street, New York, N.Y. 10014. Members of the National League for Nursing receive *Nursing & Health Care* as a membership benefit. Subscription rates for nonmember individuals: \$30 one year, \$50 two years; libraries and institutions: \$50 one year, \$85 two years; outside U.S. add \$10 per year for postage. Second-class postage paid at New York, N.Y., and additional mailing offices. POSTMASTER: Send address changes to *Nursing & Health Care*, National League for Nursing, 350 Hudson Street, New York NY 10014. Copyright 1990 by National League for Nursing, Inc. except where otherwise noted. Printed in U.S.A. All rights reserved. Reproduction in whole or in part without written permission is prohibited.

Nursing Education Appropriations

*Peter Preziosi EdM, RN
Director of Public Policy*

It's that time of year again when Congress battles over budgetary priorities and prepares the fiscal year 1991 budget. Business as usual translates into another year of deep spending cuts in health care, which means a tight rein on nursing education funding. With the exception of \$5 million set aside for disadvantaged students, President Bush's proposed budget follows his predecessor's footsteps with zero funding for nursing education.

Despite the relentless nursing supply crisis, organized nursing will be hard pressed to convince Congress to increase funding for the Nurse Education Act (NEA) much above the current 1990 funding level of \$57 million. It is a well-known fact that the supply problem cuts across all delivery settings and affects a variety of health care providers throughout the country. The crux of the problem relates to the increased demand for health providers, particularly nurses, caused in large part by the expansion in health care technology, the increasing prevalence of chronic illness, and the growing elderly population.

Compounding the continued demand for registered nurses is the decline in nursing school enrollments since the 1983-1984 all time high of 250,000 students. NLN's 1989 preliminary data show a total of 186,213 students enrolled in diploma, associated degree, and baccalaureate nursing programs, though this figure represents a 0.7% increase over 1988 enrollments, the number of students studying to be registered nurses still falls short of past enrollment numbers. Therefore, short-term prospects for a sufficient supply of qualified graduates to fill increasing numbers of registered nurse positions is bleak.

Financial assistance to undergraduate and graduate nursing students is essential to provide individuals the needed monetary resources for nursing education. Federal

funding, particularly through the nurse education act, assists in breaking down barriers to nursing education for individuals desiring to enter the profession as well as for nurses wishing to upgrade their education. Though there are other federal programs, philanthropic foundations, voluntary organizations, and business groups providing financial assistance, the nurse education act represents a broad-based funding approach to the critical issues facing the profession today.

Reauthorized by Congress in 1988, the Nursing Shortage Reduction and Education Extension Act created authority to fund special nursing projects while simultaneously increasing nursing education funding at both the graduate and undergraduate levels. Special projects include innovative hospital and long-term care nursing practice models to improve clinical nursing practice, geriatric health education centers, skill upgrades of nursing personnel through rapid transition programs, and satellite delivery for rural health education. Support for students from disadvantaged backgrounds provide support for recruitment and retention of students, stipends, faculty training, and career ladder options for licensed practical nurses.

Advanced nurse education supports programs offering master's and doctoral degrees in nursing. Professional nurse traineeships offer grant monies to registered nurses enrolled in master's and doctoral programs. Nurse practitioner, nurse midwife, and nurse anesthetist funding provides both institutional and individual educational support to produce these advanced nurse clinicians. Nurse faculty traineeships grant nursing schools post baccalaureate faculty fellowships.

Tuition and fees for financially needy full-time undergraduate students seeking a first-time nursing degree with an obligation that the graduate work a minimum to 2 years in an eligible health facility. The loan repayment program provides a student loan at a 5% interest rate with a 10-year repayment plan. Nurses can repay up to 85% of their nursing student loans by agreeing to serve for at least 2 years in a designated nursing shortage facility.

Tri Council for Nursing Funding Recommendations for Fiscal Year 1991

Nurse Education Act Programs	FY 90 (Actual)	Tri Council Requests	NEA Authorization	FY 91 Administration Budget
Special projects (Sec. 820)	12.9	14.8	20	0
Disadvantaged (Sec. 827)			5	5
Advanced nurse Education (Sec. 821)	12.9	17.2	20	0
Professional nurse traineeships (Sec. 830)	13.5	16.5	16.0	0
Nurse Practitioners/ certified nurse midwives (Sec. 822)	13.4	15.4	21	0
Nurse faculty traineeships (Sec. 830 (b))		0	1.1	0
Nurse anesthetists (Sec. 831)	1.1	1.8	1.8	0
Loan repayment (Sec. 836, 837)	1.0	1.0	5.0	0
Undergraduate scholarships (Sec. 843)	2.9	3.35	30.0	0
Total	57.7	69.05	119.5	5

All figures are in millions of dollars.

requirements. When an organization complies with CHAP standards, the client and family may be assured that they will receive the care they deserve. The guidelines also provide a basis for CHAP accreditation, a status achieved only by superior agencies.

In an era when more and more health care is being delivered in the home, CHAP is a vital link in assuring that home care is of high quality. The new standards are a bold and essential step in assuring that goal.

Standards may be acquired through Community Health Accreditation Program, Inc. (CHAP), National League for Nursing, 350 Hudson Street, NY, NY 10014.

New Initiative to Expand Educational Video Development

The National League for Nursing's Chief Executive Officer, Pamela Maraldo, PhD, RN, FAAN, has announced a new initiative to expand production of high-quality educational videos for use in both academic and practice settings. "We have always led the way in producing innovative educational resources for the nursing community—all targeted to our mission to improve the quality of health care in the nation," she said.

The first videos to be released as part of this new initiative cover nursing history, curriculum development, and nursing theory.

Nursing in America: A History of Social Reform, is a landmark documentary that traces the dramatic and tumultuous events that shaped nursing in America, including the establishment of community health nursing, the world wars, birth control, civil rights, feminism and social activism. Renowned nursing historians, nurse educators, and treasured leaders, including Ellen Baer, Virginia Henderson, Elizabeth Carnegie, and Claire Fagin, to name a few, tell the dramatic story, accompanied by rare archival footage and period music.

Curriculum: Revolutions and Counterrevolutions addresses the controversy, clarifies the issues, and promises to stimulate discussion

among nursing faculty nationwide about the curriculum revolutions. Seven nationally prominent nurse educators appear in the video to engage in passionate debate as they air their views.

Theories at Work is the long-awaited sequel to NLN's popular video, *Nursing Theory: A Circle of Knowledge*. It shows nursing theory successfully implemented on a daily basis in nursing centers across the country. Students see how theory-based nursing practices, such as Howard University College of Nursing's innovative nurse-managed pro-

gram for the homeless, and the internationally recognized Center for Human Caring at the University of Colorado, make a tremendous impact on the lives of the individuals and communities involved.

All three new video releases are available in either ½" VHS or ¾" U-Matic formats for purchase at \$275 or 10-day preview at \$75. They can be ordered from the National League for Nursing, Publications/Video Order Unit, 350 Hudson Street, New York, NY 10014, or by calling 1-800-669-1656 (in the New York City area at 212-989-9393).

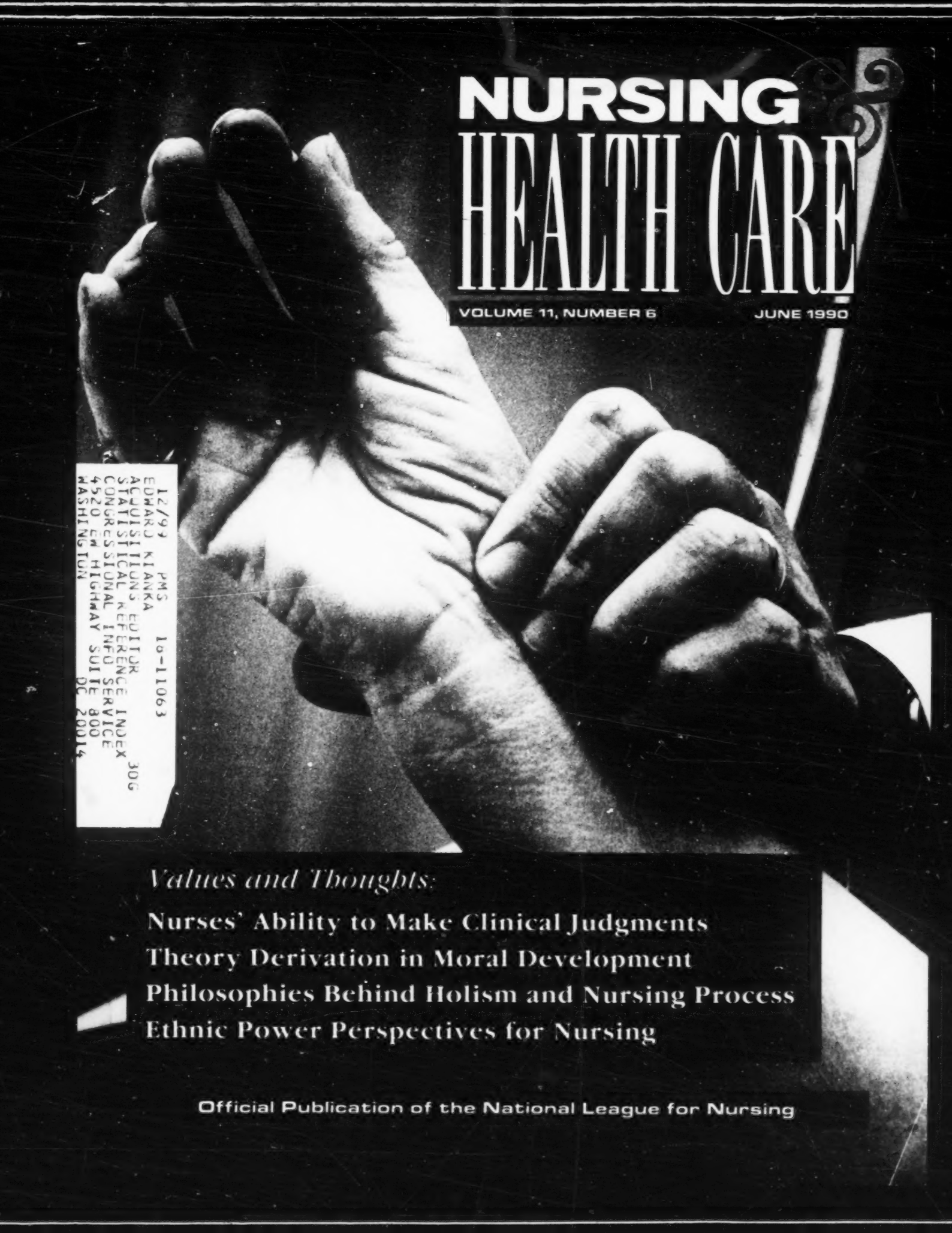
NLN's Exclusive Data Projects Nursing Shortage in 1990s

National League for Nursing President Patty L. Hawken, PhD, RN, has released preliminary NLN figures on nursing school admissions, enrollments, and graduations—the only data used by the federal government to project the severity of the nursing shortage over the coming decade. The NLN has been providing accurate projections of the shortage for over 30 years. Final data—to be available this year on April 15—will be based as it is every year on information provided by 100% of the nation's schools of nursing, while the preliminary data is based on responses from 90% of the schools.

The preliminary NLN data indicates that the number of nursing school enrollments and graduations

remains virtually unchanged from 1988 to 1989. "Unfortunately, today's data tell us that the nursing shortage will be with us in the 1990s," said Hawken. "While no change at all in enrollments and graduations is better than the serious declines we saw in recent years, we are going to need a big increase in students—not merely a leveling off—to meet the rapidly accelerating demand for nursing services." Hawken added that demand for nursing has skyrocketed in recent years as a result of several factors, prominent among them the aging of the population, the increasing needs of the chronically ill, and the growing AIDS epidemic.

	1988	Projected 1989	Projected % change
Total admissions	94,269	94,907	+0.7
Diploma	8,389	8,435	+0.6
Associate degree	57,375	57,736	+0.6
Baccalaureate	28,505	28,736	+0.8
Total enrollments	184,924	186,213	+0.7
Diploma	18,860	18,797	-0.3
Associate degree	95,986	96,642	+0.7
Baccalaureate	70,078	70,774	+1.0
Total graduations	64,839	64,871	+0.1
Diploma	5,938	5,717	-3.7
Associate degree	37,397	37,514	+0.3
Baccalaureate	21,504	21,640	+0.6



NURSING HEALTH CARE

VOLUME 11, NUMBER 6

JUNE 1990

12/99 PMS
EDWARD KIANKA
ACQUISITIONS EDITOR
STATISTICAL REFERENCE INDEX 306
CONGRESSIONAL INFO SERVICE
4520 EM HIGHWAY SUITE 800
WASHINGTON DC 20014

Values and Thoughts:

Nurses' Ability to Make Clinical Judgments
Theory Derivation in Moral Development
Philosophies Behind Holism and Nursing Process
Ethnic Power Perspectives for Nursing

Official Publication of the National League for Nursing

NURSING & HEALTH CARE

VOLUME 11, NUMBER 6

JUNE 1990



FEATURES

Experience, Education, and Nurses' Ability to Make Clinical Judgments

By Dorothy del Bueno 290

The author looks at clinical judgment, a "complex skill involving several cognitive phases and integrative processes," as one of the most important aspects of a nurse's work. Good clinical judgment, without a doubt, is desirable for both individuals and organizations.

Ethnic Power Perspectives for Nursing

By Joanne Marchione and Susan J. Stearns 296

Nurses can miss important cultural traditions and values that relate to sources of ethnic power in families, claim the authors. They say that continued efforts by nurses to learn about these values gives direction in assisting families with health care decisions.

Theory Derivation in Moral Development

By Pamela S. Chally 302

Chally describes how theory derivation for nursing in moral development can proceed beyond Kohlberg's model to include work by Gilligan, and to redefine the content for nursing.

Coming of Age in Nursing: Rethinking the Philosophies Behind Holism and Nursing Process

By Linda J. Kobert and Mary M. Folan 308

Kobert and Folan contend that the models for holism and nursing process originate from two different world views, and are inconsistent with each other. But they also say "nurses must not lose sight of their caring concern for the whole person."

Departments

283 Editorial

287 Calendar

289 Washington Focus

314 NLN Perspective

318 Announcements

319 Bookends

320 Marketplace

323 Final Word

326 Accredited
Baccalaureate
and Master's
Degree
Programs

334 Classifieds

N&HC apologizes for an April error in which a Becton Dickinson release identifies Pamela Maraldo as NLN president. Dr. Patty L. Hawken is president.

NURSING & HEALTH CARE offers diverse views on subjects of interest to readers. Articles represent the opinions of individual contributing authors and are not necessarily those of the National League for Nursing.

NURSING & HEALTH CARE

Published by the
National League for Nursing
350 Hudson Street
New York, N.Y. 10014
Outside New York City: 800-669-1656
In New York City: 212-989-9393

Chief Executive Officer
Pamela J. Maraldo, PhD, RN, FAAN
Vice President, Communications
Lisa Moss

Editor
Barbara J. Barnum, PhD, RN, FAAN

Managing Editor
Craig Little

Editorial Assistant
Rafael Olmeda

Art Director
Lillian Welsh

Artist
Lauren Stevens

Typesetting
Dan Diggles

Advertising Sales
Paul Piscator, deBeer Piscator Inc.
92 Lonely Cottage Drive
Upper Black Eddy, PA 18972—215-847-5396

Advertising Sales Information
Division of Communications, *Nursing & Health Care*
Call 800/669-1656 (In NY City 212-989-9393)

Advisory Board

Gloria Bruno, MA, RN
Vice president/director of nursing, Greenwich Hospital Association, Conn.

Sheila P. Burke, MPA, RN, FAAN
Chief of staff, Office of the Minority Leader, U.S. Senate, Washington, D.C.

Colleen Conway-Welch, PhD, RN, FAAN
Dean, School of Nursing, Vanderbilt University, Nashville, Tenn.

Kathleen M. Dirschel, PhD, RN
Vice chancellor/dean, Graduate School of Nursing, University of Massachusetts Medical Center, Worcester

Mary E. Duffy, PhD, RN
Associate professor, The University of Texas Health Care Center at Houston

Helen K. Grace, PhD, RN, FAAN
Coordinator of health programming and program director, W.K. Kellogg Foundation, Battle Creek, Mich.

Robert V. Piemonte, EdD, RN, FAAN, CAE
Executive director, National Student Nurses' Association, New York, N.Y.

Marianne Roncoli, PhD, RN
Clinical director, Obstetrics and Neonatal Nursing, Hospital of the University of Pennsylvania, Philadelphia

Christine Tanner, PhD, RN, FAAN
Professor, Office of Research, School of Nursing, The Oregon Health Sciences University, Portland

NATIONAL LEAGUE FOR NURSING, BOARD OF GOVERNORS

PRESIDENT
Patty L. Hawken, PhD, RN,
Dean and Professor, School of Nursing,
University of Texas Health Science
Center at San Antonio

PRESIDENT-ELECT
Claire M. Fagin, PhD, RN, FAAN
Margaret Bond Simon Dean, University
of Pennsylvania School of Nursing,
Philadelphia

TREASURER
Joseph Duffy
Vice President and Manager Director,
Chase Capital Management Company,
Los Angeles, Calif.

SECRETARY
Pamela J. Maraldo, PhD, RN, FAAN
Chief Executive Officer, National
League for Nursing, New York, N.Y.

GOVERNORS AT LARGE
Lenore Appenzeller, MPS, RN
Vice President, Nursing and Patient Services, St. Luke's-Roosevelt Hospital Center, New York, N.Y.

Sara E. Barger, DPA, RN, FAAN
Head, Department of Professional Services, College of Nursing, Clemson University, S.C.

Betty Battenfield, EdD, RN
Chair, Department of Nursing, University of Arkansas-Fayetteville

Beverly H. Bonaparte, PhD, RN, FAAN
President, The Gladstone Group, Inc.

Donald W. Cordes
President, Cordes & Associates, Inc.,
Des Moines, Iowa

Ellen T. Fahy, EdD, RN
Dean, School of Nursing, University of Minnesota, Minneapolis

M. Louise Fitzpatrick, EdD, RN, FAAN
Dean and Professor, College of Nursing, Villanova University, Pa.

Sylvia E. Hart, PhD, RN
Dean and Professor, The University of Tennessee, College of Nursing, Knoxville

Nan B. Hechenberger, PhD, RN
President, Neumann College, Aston, Pa.

Carole Hudgings, PhD, RN
Director International Nursing Library, Sigma Theta Tau International, Indianapolis, Ind.

Jeanette Lancaster, PhD, RN, FAAN
Dean and Professor, University of Virginia, School of Nursing

Lillian M. McCreight, MPH, RN
Director of Assessment and Quality Assurance, South Carolina Department of Health and Environmental Control, Columbia

Linda Moody, PhD, RN, FAAN
Professor, College of Nursing, University of Florida, Gainesville

Sr. Mary Robert Nagle, MEd, RN
Director, St. Vincent's Hospital School of Nursing, New York, N.Y.

Joan O'Leary, EdD, RN
Associate Professor, College of Nursing, Villanova University, Pa.

Marlene Rosenkoetter, PhD, RN
Dean, School of Nursing, University of North Carolina-Wilmington

Florence Tankevich, MS, RN
Executive Director, VNA of Newport County, R.I.

Alan Trench
Vice President, Marine Midland Bank, New York, N.Y.

Joan Trofino, EdD, RN, CNAA
Vice President, Patient Care Services, Riverview Medical Center, Red Bank, N.J.

Verle Waters, MA, RN
Assistant Dean, Ohlone College, Fremont, Calif.

Dani Wecht, MSN, RN
Vice President, The Union Memorial Hospital, Baltimore, Md.

Nursing & Health Care (ISSN 0276-5284) is published monthly (except July and August) by the National League for Nursing, Inc., 350 Hudson Street, New York, N.Y. 10014. Members of the National League for Nursing receive *Nursing & Health Care* as a membership benefit. Subscription rates for nonmember individuals: \$30 one year, \$50 two years; libraries and institutions: \$50 one year, \$85 two years; outside U.S. add \$10 per year for postage. Second-class postage paid at New York, N.Y., and additional mailing offices. POSTMASTER: Send address changes to *Nursing & Health Care*, National League for Nursing, 350 Hudson Street, New York NY 10014. Copyright 1990 by National League for Nursing, Inc. except where otherwise noted. Printed in U.S.A. All rights reserved. Reproduction in whole or in part without written permission is prohibited.

The Role of NLN Data in Assessing the Nursing Shortage

Recent issues of *Nursing & Health Care* have reported the preliminary findings from the 1989 annual survey of nursing educational programs. These data, in addition to other data sources, are used by the federal government to make manpower decisions. Graduation and enrollment statistics, while important components in determining the nursing supply, do not suffice in determining the extent of a shortage.

Two distinct dimensions—supply and demand—need to be addressed in order to project a nursing shortage properly. In a nutshell, if the number of new graduations exceeds the number of RNs leaving the supply through

retirement, death, or nonrenewal of license, the supply will not diminish. If, however, the number of new graduates fails to replace the number of those leaving the profession through attrition, then the supply will shrink. At no time in the recent past has the supply of RNs decreased. In fact, the supply has grown consistently. NLN data is clearly an important component of the supply model. Another critical piece of the supply model is the *Sample Survey of Registered Nurses*, a study conducted by the Division of Nursing and most recently fielded in 1988.

The Secretary's Commission on Nursing and others have concluded that, despite the decline in nursing

enrollments and graduations, the current nursing shortage is *not* the result of a shrinking supply but of overwhelming demand for RNs from all sectors of the health care delivery system. Data elements required to assess demand include the extent to which employers cannot fill budgeted positions, the patterns of utilization of nursing personnel and those socioeconomic trends that impact demand, i.e. the aging population, spread of AIDS, etc.

This clarification hopefully will help individuals better understand the methods used in determining the nursing shortage and the role NLN data play in this important endeavor.

Peri Rosenfeld, PhD

Vice President, Division of Research

Trends Are Encouraging, but the Shortage Isn't Over Yet

President Patty L. Hawken, PhD, RN, of the National League for Nursing has released the data on student enrollments, graduations, and admissions in nursing for the 1989 school year. For the first time in a decade, the annual survey, which includes all schools of nursing in the nation, showed a dramatic upturn in numbers of students in the profession. Fall 1989 revealed an increase of 8.9% in the number of enrollments over fall 1988.

Hawken cautioned observers of the enrollment trends that the sheer number of nurses will by no means address the nursing shortage. "While the increase in enrollments is encouraging, the outlook for the immediate shortage remains guarded," she said. "As the Secretary of Health & Human Services' Commission on Nursing pointed out last year, the root cause of the shortage lies in the utilization of nurses. If nurses are used to their fullest potential, not only will the shortage be resolved, but more importantly, nurses can address many of the most serious problems plaguing health care delivery in the nation." In particular, she explained, nurses have the proven ability to lower the cost of care.

"Study after study has demon-

strated that nurses can realize extraordinary cost savings in providing basic health care services, such as care for the elderly and chronically ill, and pre- and postnatal care to lower the nations' unacceptably high infant mortality rate," Hawken pointed out. "It has been repeatedly shown that properly utilized nurses can substantially cut direct costs. They also provide the kind of preventative care that keeps people out of very expensive—and traumatic—critical care settings, thereby cutting costs even more dramatically."

The Data

Associate degree programs led the growth with a 10.6% increase in student enrollments. Diploma programs followed with an 8.3% increase, and baccalaureate programs registered a 6.8% growth.

Number of Enrollments
on October 15, 1989

	No.	% Change
BSN	74,865	+ 6.8
ADN	106,175	+ 10.6
Diploma	20,418	+ 8.3
Total	201,458	+ 8.9

Number of Graduations, 1989

	No.	% Change
BSN	18,997	- 11.6
ADN	37,837	+ 1.2
Diploma	4,826	- 18.9
Total	61,660	- 4.9

NLN maintains the most comprehensive database in existence for nursing education statistics—data reports compiled from the annual surveys are based on a 100% response rate. It is a nonprofit coalition of nurses, other health professionals, and consumers working to maintain and enhance the quality of health care. NLN pursues its quality mission through accreditation and consultation services, continuing education programs, test services, research, publishing, video production, and through policy initiatives on behalf of nursing and consumers.

**Grantsmanship:
Process and Art**

**Qualitative
Research**

**Two Views on
Accreditation**

**Research on
Nurses:
The Cost**

NURSING HEALTH CARE

VOLUME 11, NUMBER 7

SEPTEMBER 1990

12/79 PMS 10-12115
ED NIAVKA
ACQUISITIONS EDITOR
CONGRESSIONAL INFO SERVICES 306
4920 EAST-WEST HIGHWAY
BETHESDA MD 20814

Official Publication of the National League for Nursing

NURSING & HEALTH CARE



September 1990

Volume 11 Number 7

FEATURES

Grantsmanship: The Process/The Art 346

Jean A. Kelly and Janice T. Gay

This two-part article looks closely at the mechanics and the art of obtaining grants. Those readers familiar with grantsmanship may learn something new while beginning grant writers will learn how to proceed.

Qualitative Research: Instructional Strategies and Curricular Considerations 354

Carla Mariano

The author, a dean at NYU's Division of Nursing, closely examines qualitative research. Included are discussions of theory; overview; data collection, management, and analysis and interpretations; evaluation; and academic support.

Two Views on Accreditation

Accreditation: Quality for All to See 362

Patricia Moccia

How to Prepare for an NLN Self-Study 363

Ruth Strutz and Fredericka Gilje

Two articles offer contrasting personal approaches to the process of program accreditation. Readers of *Nursing & Health Care* are invited to comment on the differing strategies and perspectives of accreditation.

Research on Nurses: The Cost 371

Janie V. Harris, Janet P. Taylor, and Victoria T. Durkee

This study by faculty at the University of Southern Mississippi in Hattiesburg is a survey of the state boards of all 50 states and the District of Columbia as to the cost of obtaining information about registered nurses.

DEPARTMENTS

Editorial 339

Letters 341

Calendar 343

Washington Focus 345

NLN Perspective ...374

Announcements .379

News 380

Bookends 385

Classifieds 386

NURSING & HEALTH CARE offers diverse views on subjects of interest to readers. Articles represent the opinions of individual contributing authors and are not necessarily those of the National League for Nursing.

NURSING & HEALTH CARE

Published by the
National League for Nursing
350 Hudson Street
New York, N.Y. 10014
Outside New York City: 800-669-1656
In New York City: 212-989-9393

Chief Executive Officer
Pamela J. Maraldo, PhD, RN, FAAN
Vice President, Communications
Lisa Moss

Editor
Barbara J. Barnum, PhD, RN, FAAN
Managing Editor
Craig Little
Editorial Assistant
Harry Wade
Art Director
Lillian Welsh
Artist
Lauren Stevens
Typesetting
Dan Diggles

Advertising Sales
Paul Piscator, deBeer Piscator Inc.
92 Lonely Cottage Drive
Upper Black Eddy, PA 18972—215-847-5396

Advertising Sales Information
Division of Communications, *Nursing & Health Care*
Call 800/669-1656 (In NY City 212-989-9393)

Advisory Board

Gloria Bruno, MA, RN
Vice president/director of nursing, Greenwich Hospital Association, Conn.

Shella P. Burke, MPA, RN, FAAN
Chief of staff, Office of the Minority Leader, U.S. Senate, Washington, D.C.

Colleen Conway-Welch, PhD, RN, FAAN
Dean, School of Nursing, Vanderbilt University, Nashville, Tenn.

Kathleen M. Dirschel, PhD, RN
Vice chancellor/dean, Graduate School of Nursing, University of Massachusetts Medical Center, Worcester

Mary E. Duffy, PhD, RN
Associate professor, The University of Texas Health Care Center at Houston

Helen K. Grace, PhD, RN, FAAN
Coordinator of health programming and program director, W.K. Kellogg Foundation, Battle Creek, Mich.

Robert V. Piemonte, EdD, RN, FAAN, CAE
Executive director, National Student Nurses' Association, New York, N.Y.

Marianne Roncoli, PhD, RN
Clinical director, Obstetrics and Neonatal Nursing, Hospital of the University of Pennsylvania, Philadelphia

Christine Tanner, PhD, RN, FAAN
Professor, Office of Research, School of Nursing, The Oregon Health Sciences University, Portland

NATIONAL LEAGUE FOR NURSING, BOARD OF GOVERNORS

PRESIDENT

Patty L. Hawken, PhD, RN,
Dean and Professor, School of Nursing,
University of Texas Health Science
Center at San Antonio

PRESIDENT-ELECT

Claire M. Fagin, PhD, RN, FAAN
Margaret Bond Simon Dean, University
of Pennsylvania School of Nursing,
Philadelphia

TREASURER

Joseph Duffy
Vice President and Manager Director,
Chase Capital Management Company,
Los Angeles, Calif.

SECRETARY

Pamela J. Maraldo, PhD, RN, FAAN
Chief Executive Officer, National
League for Nursing, New York, N.Y.

GOVERNORS AT LARGE

Lenore Appenzeller, MPS, RN
Vice President, Nursing and Patient Services, St. Luke's-Roosevelt Hospital Center, New York, N.Y.

Sara E. Barger, DPA, RN, FAAN
Head, Department of Professional Services, College of Nursing, Clemson University, S.C.

Betty Battenfield, EdD, RN
Chair, Department of Nursing, University of Arkansas-Fayetteville

Beverly H. Bonaparte, PhD, RN, FAAN
President, The Gladstone Group, Inc.

Donald W. Cordes
President, Cordes & Associates, Inc.,
Des Moines, Iowa

Ellen T. Fahy, EdD, RN
Dean, School of Nursing, University of Minnesota, Minneapolis

M. Louise Fitzpatrick, EdD, RN, FAAN
Dean and Professor, College of Nursing, Villanova University, Pa.

Sylvia E. Hart, PhD, RN
Dean and Professor, The University of Tennessee, College of Nursing, Knoxville

Nan B. Hechenberger, PhD, RN
President, Neumann College, Aston, Pa.

Carole Hudgings, PhD, RN
Director International Nursing Library, Sigma Theta Tau International, Indianapolis, Ind.

Jeanette Lancaster, PhD, RN, FAAN
Dean and Professor, University of Virginia, School of Nursing

Lillian M. McCreight, MPH, RN
Director of Assessment and Quality Assurance, South Carolina Department of Health and Environmental Control, Columbia

Linda Moody, PhD, RN, FAAN
Professor, College of Nursing, University of Florida, Gainesville

Sr. Mary Robert Nagle, MEd, RN
Director, St. Vincent's Hospital School of Nursing, New York, N.Y.

Joan O'Leary, EdD, RN
Associate Professor, College of Nursing, Villanova University, Pa.

Marlene Rosenkoetter, PhD, RN
Dean, School of Nursing, University of North Carolina-Wilmington

Florence Tankevich, MS, RN
Executive Director, VNA of Newport County, R.I.

Alan Trench
Vice President, Marine Midland Bank, New York, N.Y.

Joan Trofino, EdD, RN, CNAA
Vice President, Patient Care Services, Riverview Medical Center, Red Bank, N.J.

Verle Waters, MA, RN
Assistant Dean, Ohlone College, Fremont, Calif.

Dani Wecht, MSN, RN
Vice President, The Union Memorial Hospital, Baltimore, Md.

Nursing & Health Care (ISSN 0276-5284) is published monthly (except July and August) by the National League for Nursing, Inc., 350 Hudson Street, New York, N.Y. 10014. Members of the National League for Nursing receive *Nursing & Health Care* as a membership benefit. Subscription rates for nonmember individuals: \$30 one year, \$50 two years; libraries and institutions: \$50 one year, \$85 two years; outside U.S. add \$10 per year for postage. Second-class postage paid at New York, N.Y., and additional mailing offices. POSTMASTER: Send address changes to *Nursing & Health Care*, National League for Nursing, 350 Hudson Street, New York NY 10014. Copyright 1990 by National League for Nursing, Inc. except where otherwise noted. Printed in U.S.A. All rights reserved. Reproduction in whole or in part without written permission is prohibited.

Research on Nurses: The Cost

Janie V. Harris, Janet P. Taylor,
and Victoria T. Durkee

The purpose of this study was to survey state boards of nursing in each of the 50 states and the District of Columbia to ascertain the cost of obtaining information concerning registered nurses. A survey tool (Table 1) was mailed to all 51 state boards of nursing. A cover letter was attached requesting participation in the survey. A self-addressed stamped return envelope was included to help expedite return of the survey. There was a 100% response rate to the survey. The results are recorded in Table 2.

Table 2 is designed to give the nurse researcher baseline information that can be used when planning a research budget. It is advisable to check with the state of interest before paying any of the fees listed. Included in Table 2 are the names, addresses, and telephone numbers of the state boards of nursing for each state. The total number of registered nurses is listed in column two and includes all active and inactive nurses who hold a license in the state. Column three lists the cost to obtain a list of names of the RNs listed in column two. This cost, unless otherwise noted, is for a computer printout only. All prices are based on the December 1988 numbers for RNs and must be verified with each state prior to the payment of fees. Column four lists additional data that can be obtained from the original sample of RNs. In addition to name, address and zip code, the following information, number-coded below, can be used to group the data.

- | | |
|---------------------------------|----------------------------|
| 1. Field of employment | 10. Date of birth |
| 2. Highest degree | 11. County of residence |
| 3. Sex | 12. Marital status |
| 4. Speciality area | 13. Full-time or part-time |
| 5. Type of position | 14. Social Security number |
| 6. Nurse practitioner | 15. License number |
| 7. Major clinical practice area | 16. Alphabetical list |
| 8. Active or inactive RN | 17. License renewal data |
| 9. Race | 18. Age |

Finally, column five is an indication of any additional costs incurred above the cost for a list of all RNs. It is based on any additional data obtained as outlined in column four.

In addition to fee payment, most states need a request in

writing submitted in advance of the processing of a request for names. The request should indicate the projected use of the names. Any tools that would be mailed to the nurses on the lists should be enclosed. For further information regarding the use of names for research purposes, contact the state board of nursing for the state of interest.

Table 1

Survey of State Boards of Nursing— Retrieval of Names from Computer Systems to Utilize as Samples for Nursing Research

1. Approximate number of licensed RNs in your state
2. Cost of processing request for data (if applicable), names and addresses of all licensed RNs in your state
3. Cost of processing request for data: Names and addresses of all RNs who have master's or higher degrees
4. Extra charge for generating a random sample of all RNs
5. Cost of creating computer program to generate data, if one is not already available
☐ (a) All RNs ☐ (b) Master's or higher
6. Minimum cost for generating names from computer
☐ (a) All RNs ☐ (b) Master's or higher
7. Cost of computer time per minute
8. Additional cost of a secondary agency to generate data, if applicable
9. Is data base in a mainframe or microcomputer?
10. What type of information is available, i.e., by category or speciality area?
11. Cost of the additional information

Janie V. Harris, MSN, RNC, and Janet P. Taylor, MSN, RN, OCN, are assistant professors of nursing, and Victoria T. Durkee, MS, RN, is an instructor at the University of Southern Mississippi in Hattiesburg.

Table 2

Reference Chart for Obtaining Names of RNs

State Board of Nursing	No. of RNs	Cost for List of All RNs	Add'l Data	Cost
Alabama Board of Nursing, Suite 203, 500 Eastern Blvd., Montgomery, AL 36117, (205) 261-4060	32,000	\$640	1,2,3,4, 5,7,9,12	0
Alaska Board of Licensing, P.O. Box D-LIC, Juneau, AK 99811-0800, (907) 465-2544	5,069	\$100 minimum, then 1¢/name	15	No response
Arizona Board of Nursing, Suite 103, 5050 N. 19th Ave., Phoenix, AZ 85015, (602) 255-5092	35,400	\$60 first 1,000, \$10 each add'l 1,000 labels	1,2,5,7,8, 11,13,15	0
Arkansas Board of Nursing, University Tower Bldg., Suite 800, 1123 S. University Avenue, Little Rock, AR 72204, (501) 371-2751	17,710	\$20	8,11	0
California Board of Registered Nursing, Suite 200, P.O. Box 944210, 1030 13th St., Sacramento, CA 94244-2100, (916) 322-3350	241,944	\$9,677.76	4,6	\$50/list

State Board of Nursing	No. of RNs	Cost for List of All RNs	Add'l Data	Cost
Colorado Board of Nursing, 1525 Sherman St., Rm. 132, State Services Bldg., Denver, CO 80203, (303) 866-2871	31,000	\$785	0	0
Connecticut Board of Examiners for Nursing, 150 Washington St., Hartford, CT 06106, (203) 566-1041	38,371	\$230 list, \$90 magnetic tape	No response	0
Delaware Board of Nursing, Margaret O'Neill Bldg., Federal & Court Sts., Dover, DE 19901, (302) 736-4522	8,000	\$40	0	0
District of Columbia Board of Nursing, 614 H St., NW, Washington, DC 20001, (202) 727-7468	16,000	No response	0	0
Florida Board of Nursing, 111 E. Coastline Dr., Suite 504, Jacksonville, FL 32202, (904) 359-6331	116,458	\$646.74	2,4	No response
Georgia Board of Nursing, 166 Pryor St., SW, Suite 400, Atlanta, GA 30303, (404) 656-3943	50,000	1¢/name	16	\$475
Hawaii Board of Nursing, Box 3469, Honolulu, HI 96801, (808) 548-3086	8,000-12,000	Not available; not on computer	0	0
Idaho Board of Nursing, 500 S. 10th St., Suite 102, Boise, ID 83720, (208) 334-3110	8,308	\$75 list, \$75 labels	0	0
Illinois Department of Registration and Education, 320 W. Washington St., Springfield, IL 62786, (217) 785-0800	113,066	\$202.22	0	0
Indiana State Board of Nursing, Health Professions Bureau, One American Sq., Suite 1020, P.O. Box 82067, Indianapolis, IN 46282-0004, (317) 232-2960	53,494	\$350 list, \$100 magnetic tape	2,10,11,15	No response
Iowa Board of Nursing, 1223 E. Court, Des Moines, IA 50319, (515) 281-3255	50,000	\$442	1,2,3,4,5,6,7,8,9,10,12,13	0
Kansas Board of Nursing, Landon State Office Bldg., 900 SW Jackson, Rm. 551, Topeka, KS 66612-1256, (913) 296-4929	25,000	\$30 set-up + \$12/1000 names list, \$30 set-up + 3¢/label	0	0
Kentucky Board of Nursing, 4010 Dupont Circle, Suite 430, Louisville, KY 40207, (502) 897-5143	30,000	\$450	1,2,11,13,14	\$40/hr.
Louisiana Board of Nursing, 150 Baronne St., Rm. 907, New Orleans, LA 70112, (504) 568-5464	30,000	\$25	0	0
Maine Board of Nursing, 295 Water St., Augusta, ME 04330, (207) 289-5324	14,000	\$35	8	0
Maryland Board of Nursing, 201 W. Preston St., Baltimore, MD 21201, (301) 225-5880	47,000	\$170	0	0
Massachusetts Board of Registration in Nursing, 100 Cambridge St., Rm. 1519, Boston, MA 02202, (617) 727-7393	87,700	\$40/1,000, \$50 next 1,000, \$40 up to 10,000 list; \$200 first 1,000, then \$50/1,000 labels	4,6	0
Michigan Board of Nursing, P.O. Box 30018, Lansing, MI 48909, (517) 373-1600	80,318	\$68 magnetic tape	4,14,15	\$79
Minnesota Board of Nursing, 2700 University Avenue, W, #108, St. Paul, MN 55114, (612) 642-0567	42,000	\$40 first 1,000 \$5 each additional 1,000 labels: \$6.50/1,000 tape: \$8/1,000	3,17	Varies
Mississippi Board of Nursing, 239 N. Lamar, Suite 401, Jackson, MS 39201, (601) 359-6170	17,276	\$199	1,2,6,7,8	No response
Missouri Board of Nursing, 3523 N. Ten Mile Drive, P.O. Box 656, Jefferson City, MO 65102, (314) 751-2334	52,000	\$22.50 directory \$25-\$45/1,000	1,2,3,4,5,8,9,18	\$36/hr.
Montana Board of Nursing, Dept. of Commerce, 1424 9th Ave., Helena, MT 59620, (406) 444-4279	8,900	3¢/name	1,2,4,8,11	No response
Nebraska Board of Nursing, Box 95007, Lincoln, NB 68509, (402) 471-2115	17,240	1¢/name list, 3¢/name label	0	0
Nevada Board of Nursing, 1281 Terminal Way, Suite 116, Reno, NV 89502, (702) 786-2778	9,000	1¢/name	No response	0

State Board of Nursing	No. of RNs	Cost for List of All RNs	Add'l Data	Cost
New Hampshire Board of Nursing, Div. of Public Health Services, Health and Welfare Bldg., 6 Hazen Drive, Concord, NH 03301-6527, (603) 271-2323	18,000	Not available; not on computer	0	0
New Jersey Board of Nursing, 1100 Raymond Blvd., Rm. 319, Newark, NJ 07102, (201) 648-2490	98,000	\$650	0	0
New Mexico Regulation and Licensing Department/Nursing, 4125 Carlisle, NE, Albuquerque, NM 87107, (505) 841-6524	9,024	4¢/name labels	1,7,11,16	No response
New York Board for Nursing, State Education Dept., Cultural Education Center, Albany, NY 12230, (518) 474-3843	279,650	\$615	0	0
North Carolina Board of Nursing, Box 2129, Raleigh, NC 27602, (919) 828-0740	55,586	\$20/1,000 up to 10,000, then 1¢/name	1,2,5,7,13	\$35/hr.
North Dakota Board of Nursing, 919 S. 9th St., Suite 504, Bismarck, ND 58501, (701) 224-2974	6,500	15¢/name list, 2¢/name	1,2,15	No response
Ohio Board of Nursing Education and Nurse Registration, 65 S. Front St., Rm. 509, Columbus, OH 43226-0316, (614) 466-3947	120,000	\$100 magnetic tape, 8.2¢/name labels	14	No response
Oklahoma Board of Nurse Registration and Nursing Education, 2915 N. Classen Blvd., Suite 524, Oklahoma City, OK 73106, (405) 525-2076	50,000	\$7.50/1,000 labels, 2¢/page lists, \$5.80 for tape	6	\$1/list
Oregon Board of Nursing, 1400 SW 5th Ave., Rm. 904, Portland, OR 97201, (503) 229-5653	27,000	\$42	6	\$1/list
Pennsylvania Board of Nursing, P.O. Box 2649, Harrisburg, PA 17105-2649, (717) 783-7146	171,746	\$929.73 book	6,15	No response
Rhode Island Board of Nurse Registration and Nursing Education, Cannon Health Bldg., Room 104, 75 Davis St., Providence, RI 02908, (401) 277-2827	14,000	\$140	0	0
South Carolina Board of Nursing, 1777 St. Julian Pl., Suite 102, Columbia, SC 29204, (803) 737-6594	22,000	8¢/name list, 10¢/name labels	1,2,3,4,9,13	Negotia- ble
South Dakota Board of Nursing, 304 S. Phillips Ave., Suite 205, Sioux Falls, SD 57102, (605) 334-1243	15,554	\$200	2,4,8,10,18	Varies
Tennessee Board of Nursing, Bureau of Man- power and Facilities, 283 Plus Park Blvd., Nashville, TN 37219-5401, (615) 367-6232	66,000	\$35	1,2,4,5,18	\$35
Texas Board of Nurse Examiners, Suite 225, 1300 E. Anderson Lane, Bldg. C., Austin, TX 78752, (512) 835-4880	95,957	\$75/1st 5,000, \$10/1,000 tape; \$75/1st 5,000, \$15/1,000 disk; \$50/1st 5,000, \$10/1,000 list; \$75/1st 5,000, \$15/1,000 labels	0	0
Utah Division of Occupational & Professional Licensing, Board of Nursing, Heber M. Wells Bldg., 4th Fl., 160 E. 300 S., P.O. Box 45802, Salt Lake City, UT 84145, (801) 530-6733	10,621	\$100	4,8,15	0
Vermont Board of Nursing, Redstone Bldg., 26 Terrace St., Montpelier, VT 05602, (802) 828-2396	10,820	\$5 set-up, plus 3¢/name	4,15	No response
Virginia Board of Nursing, 1601 Rolling Hills Drive, Richmond, VA 23229, (804) 662-9909	57,000	\$400	0	0
Washington Board of Nursing Licensing Infor- mation, Div. of Professional Licensing, Box 9649, Olympia, WA 98504, (206) 753-2206	48,000	Varies	15	0
West Virginia Brd. of Examiners for Registered Nurses, Rm. 309, Embleton Bldg., 922 Quarrier St., Charleston, WV 25301, (304) 348-3596	17,000	\$43.50/1,000 labels	1,2	No response
Wisconsin Board of Nursing, Rm. 174, P.O. Box 8935, Madison, WI 53708, (608) 266-3735	47,975	\$15 1st 100, then \$3.50/1,000	15	No response
Wyoming Board of Nursing, Barrett Bldg., Suite One, 2301 Central Avenue, Cheyenne, WY 82002, (307) 777-7601	3,277	\$25 base, \$8 labels, \$4 list, \$2 S&H, \$14/hr X 3	2,10,11,18	0